

REMARKS/ARGUMENTS

Applicant responds herein to the Office Action of December 30, 2008. A petition for two months extension of time is enclosed herewith.

Information Disclosure Statement

In response to the Examiner's objection with respect to the previously filed Information Disclosure Statement, Applicant encloses herewith a translation of the relevant portions of the previously disclosed Swiss Reference No. CH 558494. Additionally, Applicant encloses a new IDS citing references previously listed in the specification of the present Application. Consideration of the disclosed references is respectfully requested.

Drawings

In the Office Action, the Examiner objected to Figs. 1-2 of the Application. Applicant encloses corrected Figs. 1-2 and respectfully requests withdrawal of the objections. No new matter has been added.

Specification

The Examiner also objected to the specification of the Application. Applicant encloses a substitute specification and a marked-up version of the specification. No new matter has been added. Withdrawal of the objection is respectfully requested.

Claim Objections

Claim 1 was objected because of certain informalities. Applicant amended Claim 1 to correct the informalities and respectfully requests withdrawal of the objection.

Claims 4 and 5 were objected to as being improper multiple dependent claims depending from another multiple dependent claim. Claim 4 is cancelled by the present Amendment. Claim 5 is amended to recite dependency from Claim 1 only. Accordingly, withdrawal of the objections is respectfully requested.

Claim Rejections

Claims 1-3 were rejected under 35 U.S.C. 112, second paragraph, as being indefinite. Applicant cancels Claim 2 and amends Claims 1 and 3 to correct the indefiniteness identified by the Examiner. Withdrawal of the rejection is respectfully requested.

Claim 1 was rejected in the Office Action under 35 U.S.C. 102(b) as being anticipated by Seebeck (U.S. Patent No. 863,001). Claim 3 was rejected in the Office action under 35 U.S.C. 103(a) as being unpatentable over Seebeck. Applicant respectfully disagrees.

Claim 1, as amended, recites a coupling device for coupling two pipe sections, which are moveable with respect to each other. The first pipe section includes a first flange 1, and the second pipe section includes a second flange 2. See, Application Fig. 1. The end face of the second flange includes an annular groove 4 with a sealing ring 3 positioned therein. The second flange further includes at least one duct 5 leading to the annular groove. As recited in Claim 1 and described in the specification, when the compressed air 6 is supplied to the annular groove 4 through the duct 5, the sealing ring is pressed against the face of the first flange 1, and, when the underpressure is supplied to the annular groove 4 through the duct 5, the sealing ring 3 is sucked into the annular groove, i.e., away from the face of the first flange. See, Substitute Specification, par. [0019]-[0020].

Seebeck discloses a joint packing arrangement in heavy machinery. Specifically, Seebeck discloses gasket 11 disposed in an annular groove 12 formed at a face of one of the two elements to be sealed. Seebeck further discloses a pipe 14 communicating with the groove 12 so as to bias gasket 11 against the end face of the cooperating element by means of a pressure introduced at the bottom of the groove through the pipe 14. However, Seebeck does not disclose or even suggest that the annular groove can be subjected to underpressure so as to suck the sealing ring back inside the annular groove. As may be seen from lines 9 through 15 of page 1 of Seebeck, there are mechanical means in the form of channeled rim formations for locking the closure and the drum against one another so that there is only a small remaining distance and a rigid coupling of the parts to be mutually sealed. Additionally, Seebeck proposes to insert wedges 13 to press the closure against the drum.

As further may be seen from line 90 through 96 of page 1 of Seebeck, for disrupting the seal, the pressure in the steam drum is diminished and the pressure at the bottom of the groove is then decreased, so that the packing ring no longer makes a tight joint allowing the steam within the steam drum to escape. This escaping steam moves the gasket 11 into the groove 12 so that all remaining steam may escape. Accordingly, there are no means in Seebeck to suck the sealing ring into the annular groove. In fact, as may be seen from Figs. 4 and 5 of Seebeck, gasket 11 together with the backing diaphragm 17 fills the entire space of the annular groove. The gasket

may be pressed out of this groove by overpressure, but cannot be sucked back inside the annular groove because, even if the underpressure is supplied through the pipe, only the membrane 17 would be deformed away from the drum.

In summary, the gasket of Seebeck and the annular groove housing this gasket are neither provided with any means for the sealing ring to be sucked into the annular groove, nor is there any means to introduce an underpressure at the bottom of the annular groove such that the gasket is sucked inside the annular groove, thereby avoiding any possibility of friction on a movement of the two elements to be sealed against one another in a plane perpendicular to the plane of the gasket.

This is of special importance with the type of machinery for which the subject matter of the present invention is intended, i.e. the cleaning disinfecting and drying machines, in which a trolley is moved into and out of a housing of the machine. Such trolley typically contain the articles to be cleaned or disinfected and further includes some means which are fed by a cleaning medium like water mixed with a detergent to be sprayed on the articles to be cleaned from above the trolley. Such trolleys are moved rather frequently in and out of the machine so that any friction between the elements to be sealed against one another would not only lead to increased manual efforts to fully move the trolley into the machine but also to increased wear of the parts because of their frequent relative movement. Such wear of the parts is of less concern in the device disclosed in Seebeck where the relative movement between the closure and the steam drum of Seebeck is less frequent than in a cleaning disinfecting and drying machine.

Further, sucking the sealing ring inside the annular groove allows for an improved disinfection of the machine itself before the next use, that is of special importance in using such machinery in a medical environment.

Accordingly, the above limitations of Claim 1 are not disclosed or even suggested in Seebeck. Further, none of the other cited references remedy the above deficiency of Seebeck. Therefore, Claim 1 is allowable over the cited prior art. Claims 3 and 5 depend from Claim 1. Therefore, Claims 3 and 5 are allowable over the cited prior art at least for the same reasons as Claim 1 and further on their own merits.

Favorable reconsideration of the rejections and allowance of pending Claims 1, 3 and 5 are respectfully requested.

THIS CORRESPONDENCE IS BEING
SUBMITTED ELECTRONICALLY
THROUGH THE PATENT AND
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RCF/AF:dl

Respectfully submitted,



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